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NOVA HIGH SCHOOL--INTRODUCTION

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AN OVERVIEW WAS PRESENTED OF THE ORGANIZATION AND OPERATION OF A NUMBER OF INNOVATIVE ASPECTS OF THE NOVA HIGH SCHOOL IN FORT LAUDERDALE, FLORIDA. NOVA IS PART OF A COMPLEX PLANNED TO INCLUDE GRADES K THROUGH 12. STUDENTS MUST APPLY TO ATTEND NOVA AND ARE SELECTED PRIMARILY ON THE RELATION OF STUDENT PERFORMANCE TO MEASURES OF APTITIDE. VOCATIONAL TRAINING IS NOT PROVIDED IN EITHER TECHNICAL OR BUSINESS SKILLS. THE SCHOOL EXISTS TO PROVIDE ACADEMIC GROUNDING FOR A LIFETIME OF LEARNING. NO EXTRACURRICULAR ACTIVITIES ARE PERMITTED DURING THE SCHOOL HOURS AND THE SCHOOL HAS NO CAFETERIA, AUDITORIUM, FOOTBALL STADIUM, OR BUS SERVICE. FOOD SERVICE IS PROVIDED BY PRIVATELY OPERATED SNACK BARS. FACULTY MEMBERS ARE NOT REQUIRED TO PARTICIPATE IN EXTRACURRICULAR ACTIVITIES. ONE OF THE MORE NOTEWORTHY FEATURES IS THE SUPERIOR ADMINISTRATIVE AND TEACHING STAFF EMPLOYED. THE STAFF HAS BEEN FREED OF MANY CLERICAL TASKS BY THE EMPLOYMENT OF A NUMBER OF AIDES. AN ARTIST HAS ALSO BEEN EMPLOYED TO PREPARE MATERIALS FOR VISUAL PRESENTATIONS. NOVA'S MODERN SCHOOL PLANT PROVIDES CLOSED CIRCUIT TELEVISION, A DIALOG SYSTEM TO 66 STATIONS, AND THREE RESOURCE CENTERS. THE COST PER PUPIL OF OPERATING NOVA IS LESS THAN FOR SOME OF THE OTHER SCHOOLS OF BROWARD COUNTY. A CHART OF THE STAFF ORGANIZATION AND THE PLANS OF THE SCHOOL BUILDING ARE INCLUDED. RELATED REPORTS ARE ED 010 569 AND ED 010 570. (AL)

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TECH MEMO

a working paper

System Development Corporation / 2500 Colorado Ave. / Santa Monica, California 90406

Nova High School: Introduction

ABSTRACT

This Tech Memo is the first of a series reporting the work done with Nova High School in connection with the study New Solutions to Implementing Instructional Media Through Analysis and Simulation of School Organization. In this document, Nova High School, Ft. Lauderdale, Florida, is described as a total organization in terms of its environment, personnel, objectives, space and facilities, use of instructional media, and its noteworthy organizational features.

* * * * * *

I. INTRODUCTION

This document presents an overview of the organization and operation of selected aspects of the Nova High School at Fort Lauderdale, Florida.

Information presented in this document was given by Mr. Wolfe and his staff in a series of interviews. Following construction of organization charts and preparation of the verbal description, the accuracy of this material was checked by Mr. Wolfe and Mr. Schneider, head of the social studies department.

II. TECHNICAL DISCUSSION

A. BACKGROUND AND OVERVIEW

The Nova High School is unique in a number of ways. Some of the more prominent aspects in which it is unique are discussed below.

1. Organization

Nova is a part of a complex consisting of kindergarten through the 12th grade that is planned for Broward County. All of the construction for the junior-senior high school was completed in 1965. Students from the 7th through the 12th grade attend the school.

2. Student Selection

Students from Broward County must apply to attend Nova. Students are selected primarily on the basis of date of application if they are judged to be "academically motivated." In other words, students who have both high and low aptitudes are accepted. The major criterion for acceptance, apart from application date, is whether or not the performance of the student seems to be consistent with measures of aptitude.

3. Academic Orientation

The basic philosophical and educational orientation of the school is that it exists to provide an academic grounding for a lifetime of continuous or intermittent learning. School personnel do not plan to provide vocational training in either technical or business skills. They plan, rather, to provide students with basic principles that are applicable in a number of disciplines. For example, courses in technical science are designed to provide students with basic skills and concepts for understanding fields of work like electronics rather than training them in proficiency for technical employment.

All students must take English, mathematics, social studies, language, and science all year long. Five languages are offered in the school and may be taken from the seventh grade on. Students may generally take only one elective course at a time. Electives consist of drawing, home economics, personal typing, and driver education. All activities, including driver training, orchestra, and so forth, occur in extra school hours. The school day is from 7:45 A.M. to 3:55 P.M.; no extracurricular activities are allowed during that time period.

4. Scheduling

Nova is organized on a trimester plan; each trimester is 14 weeks in length. Nova students have a school year that is 220 days long compared with a school year of 180 days in other schools in Broward County.

Classes are organized into 70-minute class periods, with most classes meeting four times a week. However, social studies, physical education, and technical science meet only two or three times a week at the seventh- and eighth-grade levels. This is designed to permit a variety of classroom activities that otherwise would be impossible.

5. Building Facilities

The school plant is outstanding in terms of available resources and modern design. A closed circuit television system and a Chester Dialog system are available to any one of 66 stations. Three resource centers are available and are discussed in greater detail later.

6. Cost

Despite its many advantages, Nova is operated at no greater cost-per-pupil than are other schools in this district. The cost-per-pupil at Nova is $320 per school year. The cost-per-pupil for a sample of other schools in Broward County is $278, $292, $305, $309, $311, $320, $324, and $348. In fact, Nova was justified on the grounds that superior opportunities could be provided for students at a cost no greater than that found in other schools. Costs are controlled by the following measures: Parents must be responsible for getting the students to the school, or they can have the children picked up by bus, but the bus is paid for by the parents at the rate of approximately 15 cents per day. The school has no cafeteria. However, four strategically placed snack bars are located in the school and these are run on a profit basis, but the school has no responsibility for them. Those students who purchase lunches or who want something to drink can use the snack bars. There is a small gymnasium with 1300 seating capacity; but there is no auditorium and no football stadium. The gymnasium is used for special events and basketball. Faculty are not required to participate in extra curricular activities. Parents are encouraged to participate and help in the school. The parents provide some clerical help and also help in the area of health and the library. Dances that are held by the school are chaperoned by the parents' service group.

7. Staff

Without doubt, one of Nova's more noteworthy features, and certainly the one which will ultimately determine its success or failure, is the superior administrative and teaching staff which has been employed. This staff has

proved to be willing to investigate innovative methods of teaching. In addition, a well qualified advisory committee has been assembled to give direction in curriculum development.

In order to set teachers free to teach, a number of aides have been employed to perform the numerous clerical tasks inherent in the school's operation. Also, the services of an artist have been obtained to prepare materials for various visual presentations.

B. ADMINISTRATIVE STRUCTURE

1. Relationship to Broward County School Organization

The organization of Broward County Schools is shown in Figure 1. Ultimately, of course, all school personnel are responsible to the citizens of Broward County (indicated by PUBLIC in the figure) who elect the Board of Public Instruction and the Superintendent of Schools, Dr. Ashmore. All other school personnel are selected and appointed by the superintendent or those authorized by him to do so.

For administrative purposes, the Broward County School System is split into two main divisions: instruction and business; each is administered by an assistant superintendent. In addition to the two assistant superintendents, three other administrators report directly to the Superintendent of Schools--the Director of South Florida Education Center (of which Nova High School is a part); the Director of Employee Services; and the President of Broward County Junior College.

In addition to a number of central office personnel, the various elementary and secondary school principals report, via the respective directors of elementary and secondary education, to Dr. McComb, the Assistant Superintendent of Instruction.

In summary, the organization of Broward County Schools appears to offer to Nova High School the advantages both of direct communication with the Superintendent and of staff support from other offices. In an experiment as novel as that being undertaken, these dual advantages appear quite important.

2. Organization of Nova--General

As might be anticipated in a school such as Nova, the details of organization have not been determined in any final sense. In fact a comparison of a 1963-1964 organization chart with a similar chart for 1964-1965 reveals a number of differences, some of rather major proportions. However, this flexibility is

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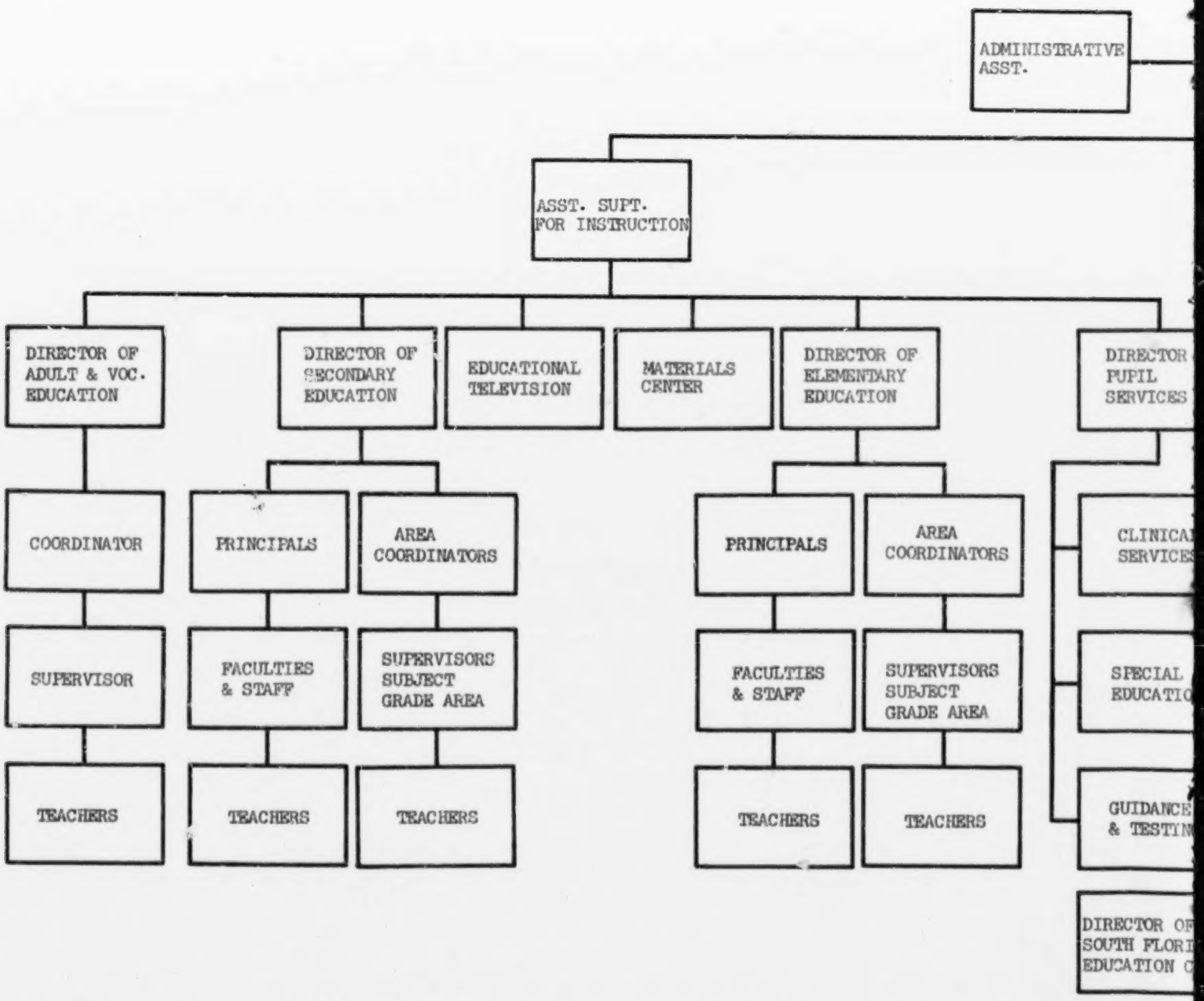
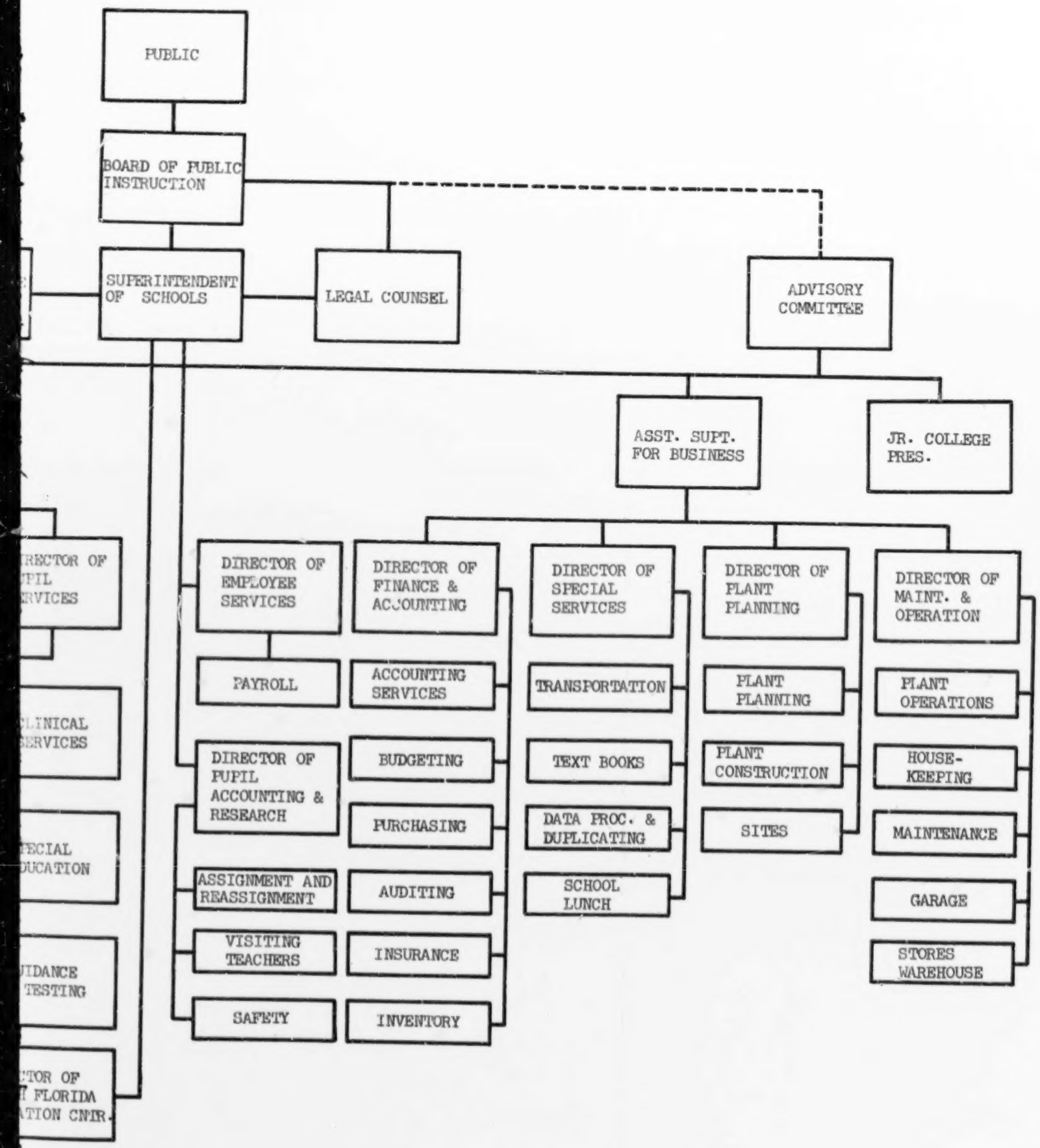


Figure 1. Organizati



anization Chart for Broward County Schools

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undoubtedly essential, since detailed operation of a new program is difficult to anticipate and must be accommodated as the program is implemented.

In order to present as current a description as possible of the Nova organization, Figure 2 shows the organization of the school as of the time our staff visited the school. At the time of our visit, these organizations were not fully implemented.

In a line relationship, the responsibilities may be divided into academic and nonacademic duties. The academic responsibilities are divided among six coordinators of major areas--social studies, language arts, science, coordinator of academic games, mathematics, and technical science. In addition, one department head--physical education--and two teachers report directly to the Director.

The nonacademic responsibilities are divided among an athletic director; a librarian; a guidance director; an artist, who provides the visual displays used by the various teachers; an office manager, who manages the central office pool of secretaries and switchboard operators; a television technician; a TV production coordinator who manages, directs, and operates the television and Chester Dialog Systems; a food service manager, who is also responsible for the bookstore; and a head custodian, who is responsible for all custodial services.

As is readily seen, with this number of people reporting directly to him, the Director of the high school delegates a good deal of authority for individual area operation to the various lower level administrators.

C. ACADEMIC ORGANIZATION

As has been indicated, academic responsibilities at Nova High School are split into three patterns--the five major academic areas of science, language arts, mathematics, social science, and technical science; a physical education section; and two music instructors. While the precise functioning of an academic area is left to the individual administrator's judgment, two major elements are typical of each area's organization. These two elements are shown in Figure 3, a generalized organization chart for a typical academic area at Nova. The two common elements are: (1) instructors organized into teams with one of the instructors either designated as the team leader or functioning informally in that role; and (2) teacher aides who work with the teams. (Despite the almost universal usage of the term "team" in Nova academic departments, team functioning varies widely from one department to another. Team functioning is discussed in more detail later in this document.)

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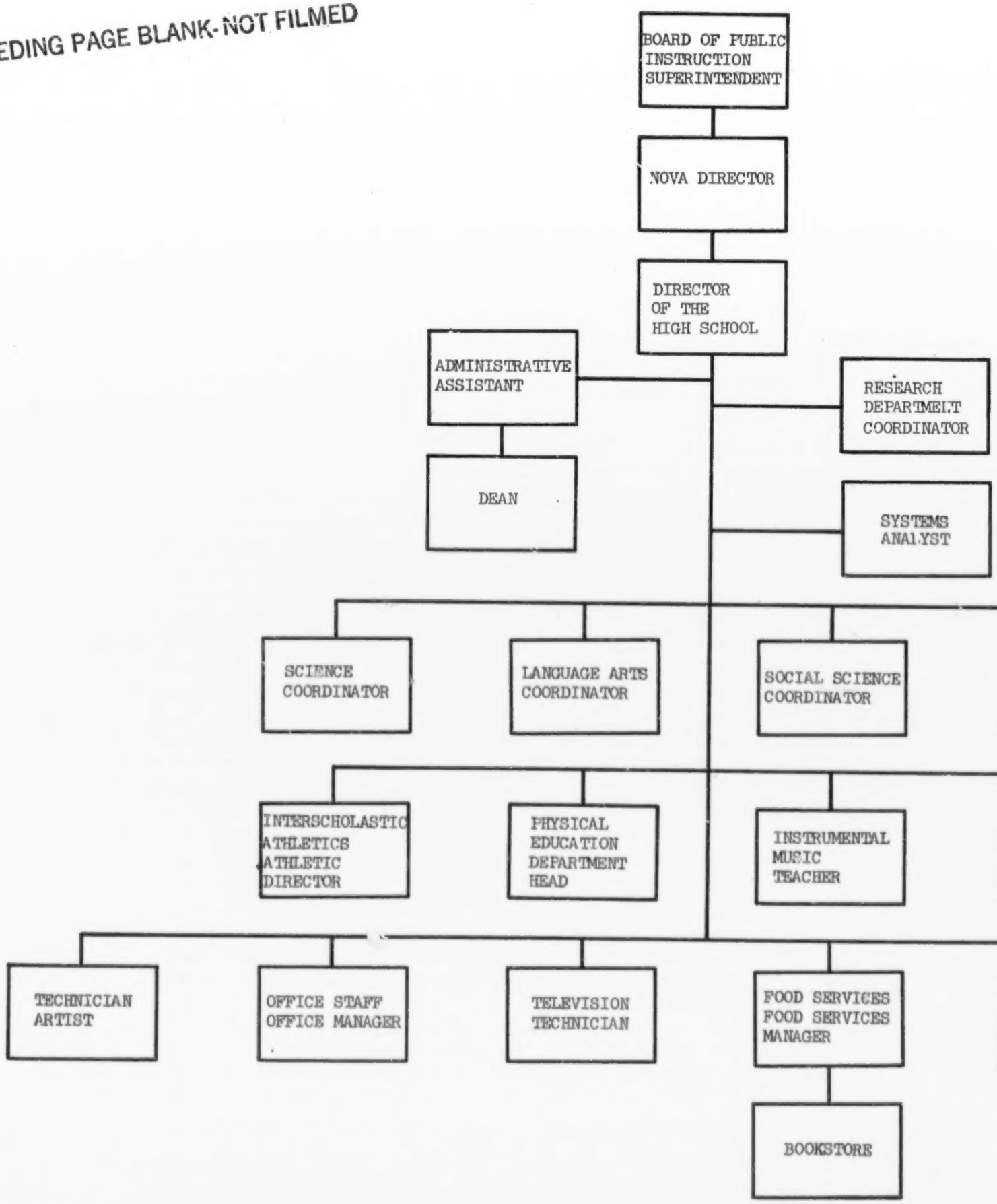
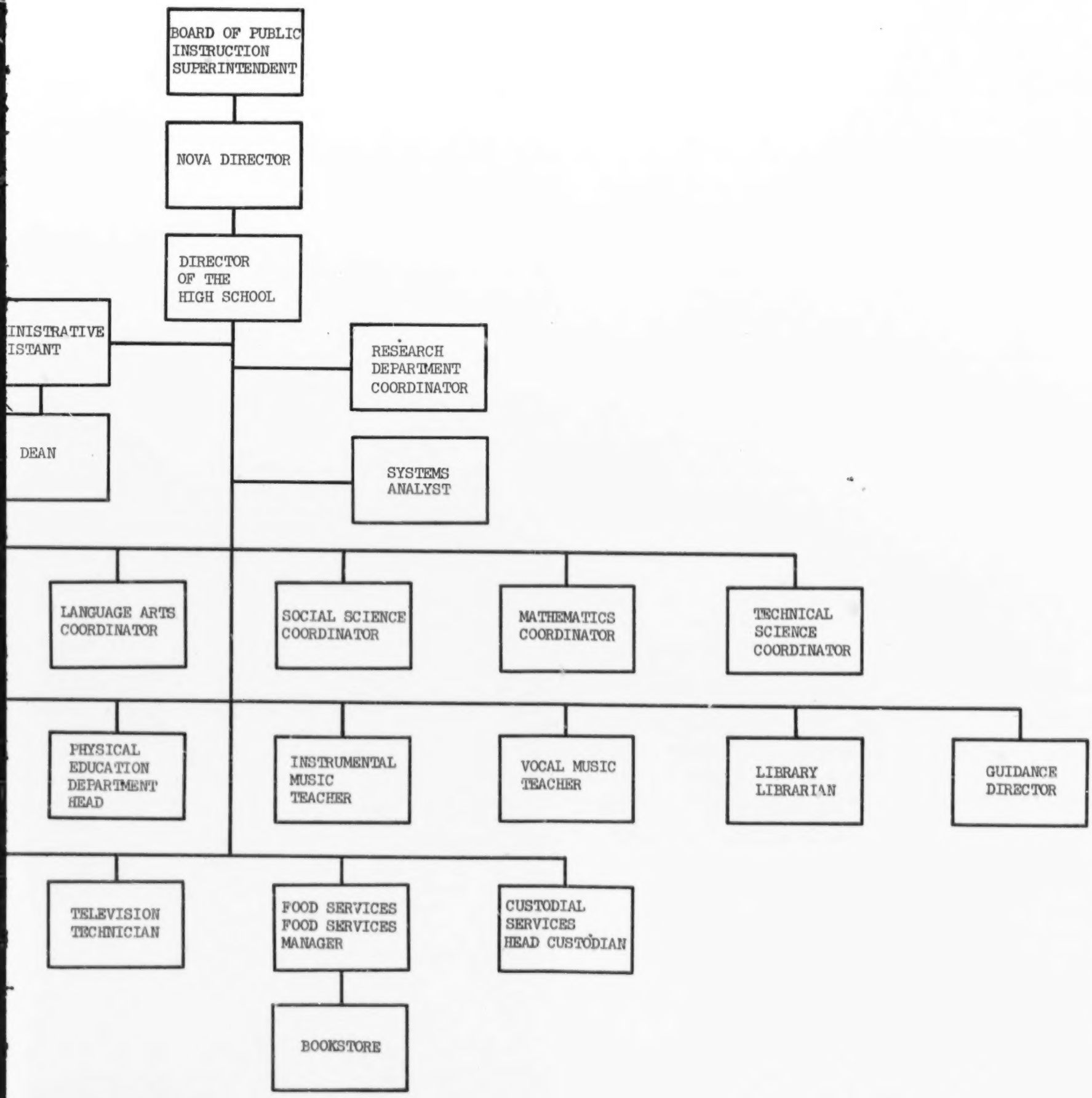


Figure 2. Organization Chart for Nova -- 1964-65



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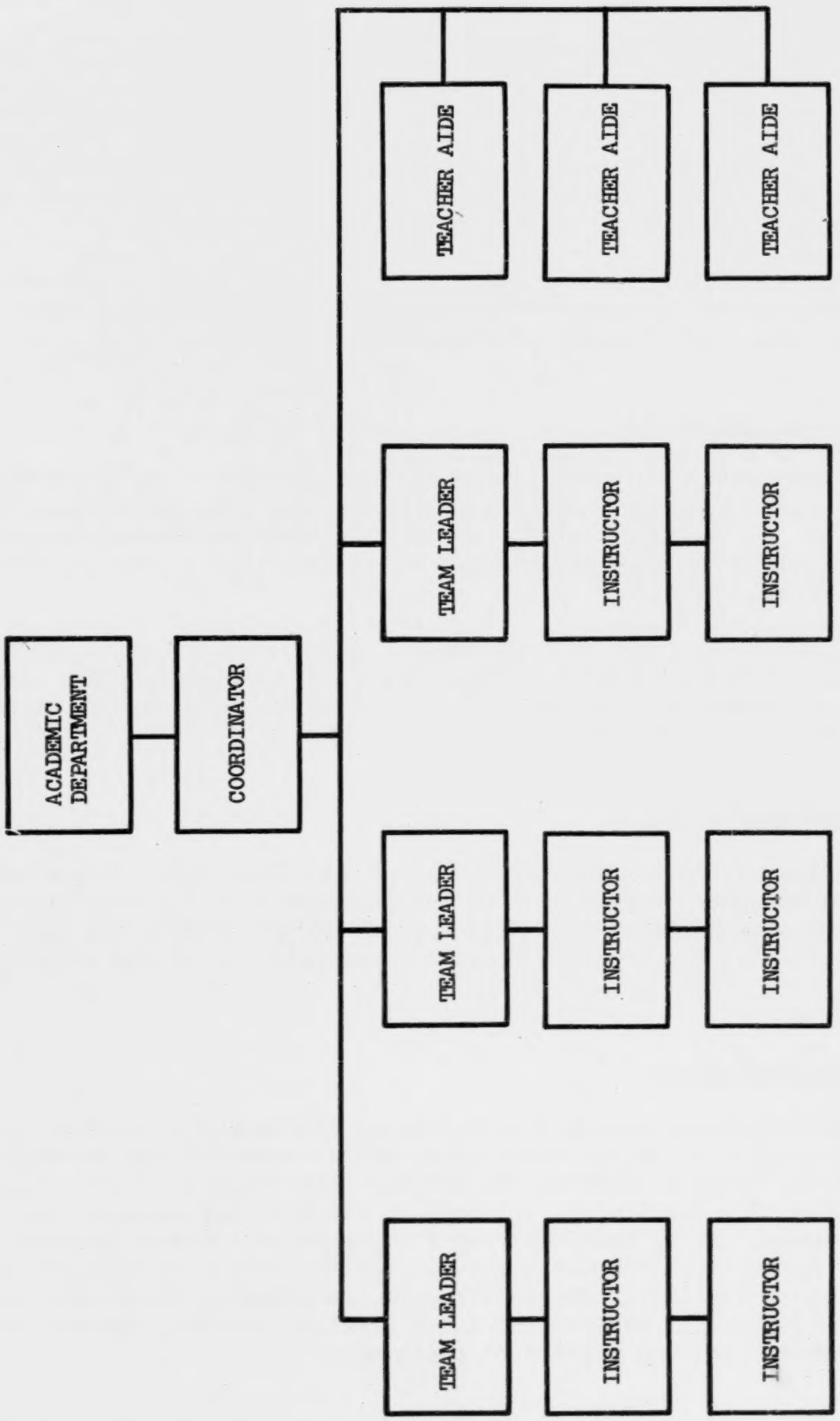


Figure 3. Academic Department Organization -- Nova High School 1964-65

1. Science Department

Mr. Paul Bethune is the Science Department Coordinator. For the 1964-1965 school year, science department instructors are organized in five teams: junior high science, sequence A; junior high science, sequence B; earth science; biology; and chemistry. While some science department teams may appear to be organized on the basis of sequence and others on the basis of content, in actuality sequence and content parallel each other very closely, and all teams are organized to conform quite well to both.

In the science department, instructional teams function quite completely as teams. Not only do the instructors plan together and prepare materials together, they also share teaching responsibilities.

2. Language Arts Department

In 1963-1964, the Nova High School Language Arts Department was assigned instructional responsibility for English, the various foreign languages, and social studies. In 1964-1965, social studies was made a separate department, leaving just English and foreign language under direction of the department chairman, Mr. Thomas Ryan.

The Nova High School Language Arts Department adheres to the pattern already described--that of being organized around teams and with the teacher aides reporting to the department chairman. As in science, most teaching teams in the language arts department function as teams.

3. Social Studies Department

As already indicated, during the first year of Nova High School's operation, social studies was under supervision of the language arts coordinator. However, beginning with the 1964-1965 school year, social studies was made a separate department. Dr. Donald Schneider is coordinator of the social studies department.

4. Mathematics Department

The mathematics department, with Mr. Kaufman as coordinator, utilizes the same explicit organization as do the other departments; however, the mathematics department teams function somewhat differently from teams in other departments. Since the mathematics curriculum is largely a vertical arrangement, at least within each course, use of team teaching for classroom instruction means combining groups at vastly different places in the curriculum or else forcing all students to remain together. For this reason, mathematics department teams, composed of those faculty members who teach specific courses, operate primarily in the planning and testing aspects of teaching.

5. Technical Science

The technical science department, with Mr. Smith as coordinator, includes a rather wide spectrum of disciplines ranging from art to driver education and including industrial arts, home science, and personal typing. In this department the teams are formed according to course content. During the 1963-1964 school year, because of the diverse nature of the subject matter, relatively little team teaching was done in the technical science department; however, team teaching will be extended during 1964-1965.

In addition to the faculty and the teaching aides, Mr. Smith, the Technical Science Coordinator, is responsible for graphic arts; this area includes responsibility for the duplicating facilities for the entire school--a rather large operation at Nova High School where many of their materials are prepared locally to be adapted to their needs.

6. Physical Education Section

At Nova High School, a serious attempt is being made to emphasize the academic aspects of school. Consequently, an area such as physical education receives less attention. This difference in status is indicated by the title given to physical education--section rather than department.

7. Music

Although not emphasizing this area, Nova High School offers courses in both vocal and instrumental music. These studies are not organized into a single department or section. Instead both instructors report directly to Mr. Fitzpatrick.

D. NONACADEMIC ORGANIZATION

Since Nova High School is a very different type of high school, nonacademic organizations are, of necessity, different in some respects from those in a typical secondary school. However, this difference lies primarily in the numbers of staff members assigned to various activities.

1. Library

The library, or resource center, with Mrs. Mattison as librarian, is much larger at Nova High School than is typical of other high schools of this size. Furthermore, three of the four academic buildings have resource centers. While this arrangement provides maximal opportunity for student and faculty usage, it also complicates staffing of various centers. Despite the increased

responsibilities and the three locations, Nova Resource Centers operate with a minimal number of full time personnel, and use junior college students whenever possible.

2. Guidance

Guidance is under the direction of the Guidance Director, Mr. Morgan, who has a staff of three counselors. The counseling staff is responsible for testing students and for helping students explore future vocational and educational plans and for help with personal problems. The coordinators of the various departments also counsel a large number of students.

3. Interscholastic Athletics

This area is similar at Nova High School than is common in other schools. The coaches all have primary academic responsibility to some other department. Within the Interscholastic Athletics Section, the coaches are organized into the typical coaching teams for the various sports.

In addition to the nonacademic functions already mentioned, Nova High School has the following very important staff positions:

- TV Production Coordinator--Mr. Orput is responsible for the production and coordination of television presentations.
- Television Technician--Mr. Carls is responsible for operation and maintenance of the television station and the Chester Dialog System.
- Artist--Mr. Bates is a full-time artist who designs and prepares various types of visual aids for the teachers.
- Office Manager--Mrs. Bellis is responsible for the central office staff, including the secretaries, bookkeeper, data processing operator, and the switchboard operators.
- Food Services Manager--Mr. Nolan is responsible for both the food services and the bookstore.
- Head Custodian--All custodial services are directed by Mr. Olin, the head custodian.

D. PHYSICAL PLANT

In designing a physical plant, Nova High School planners recognized the need for buildings quite different from those in the usual secondary school. This planning is clearly apparent in the structures which were designed and built. The buildings reflect the Nova philosophy rather than simply the designs common to our period.

The floor plan of the main building group of the Nova High School plant is shown in Figure 4. These rooms are grouped into five buildings. Moving in a counter-clockwise direction beginning in the upper left hand corner of the figure, the buildings are labeled as administration, language arts, technical and special studies, mathematics, and science. In the center of the quadrangle formed by these buildings are two lecture halls, one for the language arts courses and one for science and mathematics courses.

E. SPECIAL FEATURES

The following special features are incorporated in the school layout.

1. Absence of "Typical" Classrooms

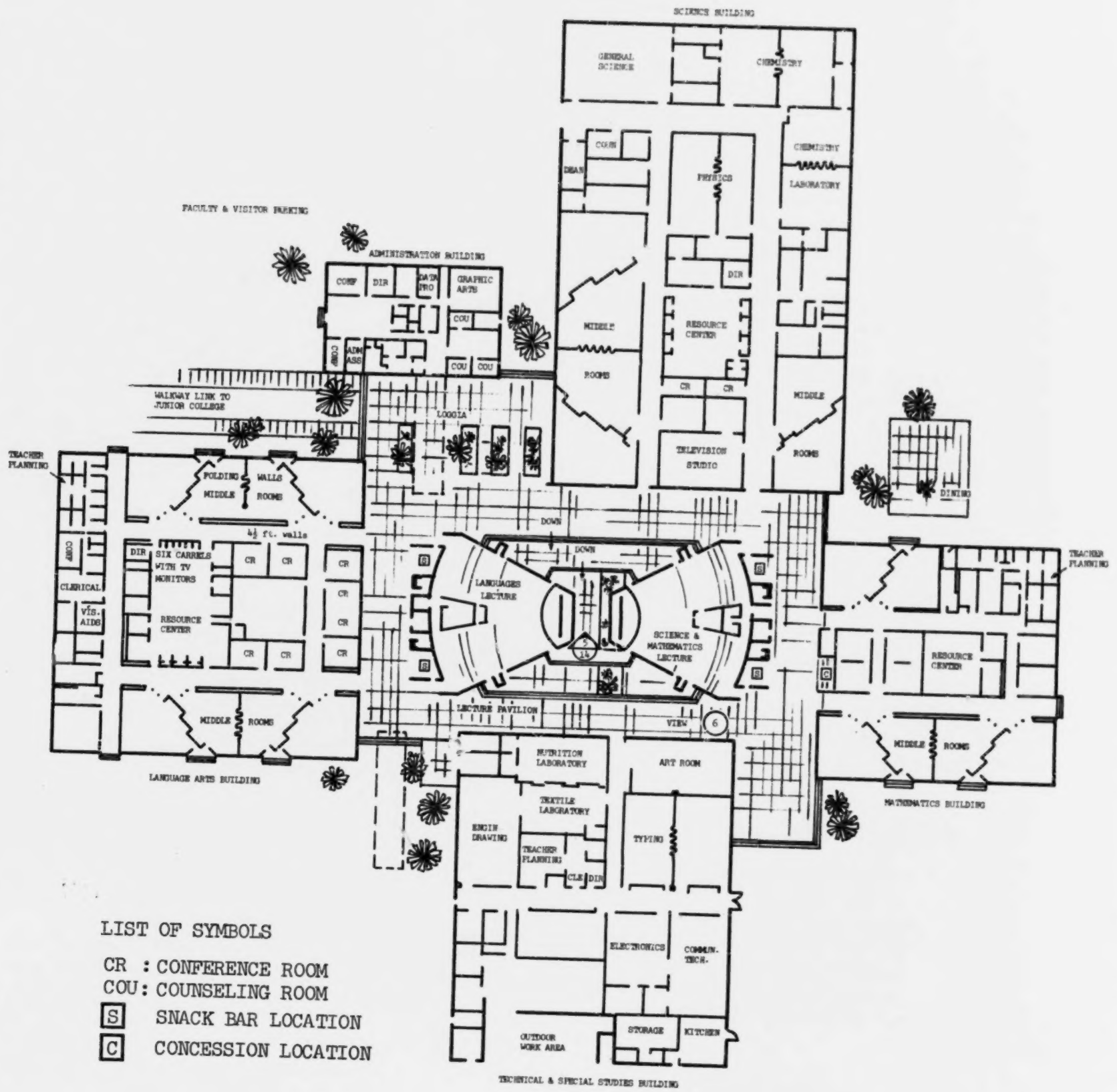
Perhaps the first aspect of Figure 4 to catch the eye is that the school layout has no heavy concentration of "typical" classrooms. In each of the four classroom buildings, rooms that might be considered typical require less than half of the available floor space. While none of the buildings is dominated by any other single type of space usage, the role of the traditional classroom is certainly de-emphasized.

2. Conference Rooms

A second feature worthy of note is the number of conference rooms, designated "CR." In size, the conference rooms are about 14 feet wide by 24 feet long; walls separating the conference room from the classroom are 4-1/2 feet high, so that when in the conference room, the teacher can keep ready visual and auditory contact with the students in the regular classroom. At the same time, students in the conference rooms have enough privacy so that they feel free to express themselves in discussions.

3. Teacher Planning Areas

The teacher planning areas comprise the third notable aspect of Nova buildings. In each of the buildings is a set of small work-study areas with a space for each teacher. There are open walls between the teachers and students. Although



LIST OF SYMBOLS

CR : CONFERENCE ROOM
COU: COUNSELING ROOM
S SNACK BAR LOCATION
C CONCESSION LOCATION

Figure 4. Nova High School Floor Plan

these spaces do not provide the luxury of private offices, they do offer the teacher a space where he can retire from constant contact with students to study and plan for his future meetings with them.

4. Resource Centers

The three resource centers at Nova High School deserve special comments. These resource centers are interesting because they are separated from the corridors only by low walls, thus permitting immediate visual access.

The largest single responsibility of the resource centers is the school library which is housed in an open-stack arrangement in the three centers. In addition to the library, each of the resource centers has a number of carrels for the use of audio-visual aids.

The audio carrels are connected with the Chester Dialog System so that the student can dial any tape currently available through the system. Primarily, these are foreign language tapes; however, other tapes are available also.

The video carrels are connected to the television studio. The student can be connected with the television facility by requesting the librarian to call the studio and ask for a given tape or program. Special programs and lectures prepared by the various departments are regularly taped for future use. These are available for students who were not in attendance or who desire a replay as well as for more generalized future use by the school.

Each resource center also contains additional special features. For example, connected with the science building resource center is an experimental laboratory in which various advanced projects can be conducted. In conjunction with the resource center in the language arts building area both a reading laboratory and an equipment facility are provided for producing, storing, retrieving, and reading microfilm and microfilm cards. This latter facility enables teachers to have special items placed on microfilm or microfilm cards and made available to students.

Each resource center also contains several typing carrels where students can prepare typewritten notes or type their reports.

5. Television Studio

Although closed circuit television is certainly becoming more common in secondary schools, relatively few schools have studios with full time personnel to man them. Nova High School, however, does have such personnel. The television studio, located in the science building, houses both the central television equipment and the Chester Dialog System. Each classroom has one or more television monitors; the language laboratory and all the resource centers have dial access to the Chester Dialog System.

6. Open Arrangement of Buildings

Seven separate structures, five buildings and two lecture halls, form the main building group of Nova High School. All of these buildings are connected by a covered patio, thus permitting ready interbuilding movement in inclement weather. The combination of the separate buildings and the covered connecting patio is both attractive and practical.

7. Middle Rooms

Although flexible space arrangement is becoming rather common in secondary schools, many schools are still being built without such provision. For this reason, mention is made of Nova's middle rooms in the language arts, technical and special studies, mathematics, and science buildings which consist of two slightly larger than normal rooms that are divisible by sliding doors. With the doors closed, two classrooms are formed. Opening the doors provides a single, large space in which two teachers may combine their classes for large group instruction.

8. Lecture Pavilion

In addition to middle rooms, Nova High School has a "lecture pavilion" with two structures, each capable of holding 200 students in a large group instructional situation. Each of the halls can also be subdivided into three rooms, two of which will hold 50 students each and a third one which will accommodate 100 students.

F. BUILDING ARRANGEMENTS

Although the more special features of the school plant have been mentioned, a brief description of the separate buildings is appropriate:

1. Administration Building

This is a typical, small office building which houses the director and assistant director, the pupil personnel staff, data processing, and graphic arts.

2. Language Arts Building

This building houses the language arts and social science departments. This building contains four typical classrooms; two middle rooms, which in turn can be divided into four classrooms; the language laboratory with its 50 stations; eight conference rooms; a resource center; a teacher planning area; and the visual aids production center.

3. Technical and Special Studies Building

This building contains the art area, typing room, home economics area (comprising the nutrition and textile laboratories), engineering drawing room, electronics and communication technology areas, wood and metal shops, and a teacher planning area.

4. Mathematics and Social Studies Building

This building houses the mathematics and social studies departments. The building contains nine classrooms, a resource center, six conference rooms, a teacher planning area and clerical office plus two additional administrative offices.

5. Science Building

This building houses the science department. As such it has four classrooms, a middle room, four laboratories, two conference rooms, a resource center, and a teacher planning area. In addition to science facilities, the television studio is in this building.

6. Physical Education and General Activities Building

A physical education building includes a large gymnasium area with folding bleachers and boys' and girls' locker rooms. The gymnasium is also used as an auditorium for other large group activities.

III. SUMMARY

This document was designed to give an overview of Nova High School and to suggest certain ways in which it differs from other secondary schools. As a school designed for the future, Nova presents an interesting image, but it also faces new challenges and problems which have no ready solutions that can be selected from past experience. Only through a farsighted administration, a dedicated staff, and a tolerant and supporting community will Nova experience its full potential.